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HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER

SHIN, KYUNG H

ART UNIT	PAPER NUMBER
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2143

DATE MAILED: 03/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/034,466	BUSHEY, ROBERT	
	Examiner	Art Unit	
	Kyung H. Shin	2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This action is responding to application amendment filed 12/14/2005.
2. Claims 1 - 37 are pending. Independent claims are 1, 9, 17, 29.

Response to Arguments

3. Applicant's arguments filed 12/15/05 have been fully considered but they are not persuasive.

- 3.1 Applicant argues that the referenced prior art does not disclose "... an application information base (AIB) for storing interface information for each of said two connected to said appliance network ..." (see *Remarks Page 10, Lines 17-18*) ; "... store appliance compatibility information ..." (see *Remarks Page 10, Lines 24-25*)

The Singhal (6,925,481) prior art discloses the capability for the interconnection of multiple devices (i.e. WIDs, appliances). (see Singhal col. 4, line 65 - col. 5, line 7: multiple devices) In, addition, the Singhal (6,925,481) prior art discloses the capability to transfer data from one device (i.e. appliance) to another device (i.e. appliance). A successful data transfer requires the capability to perform any and all required data conversions for inter-device compatibility. (see Singhal col. 3, lines 42-53: data transfer capability) And, the Singhal (6,925,481) prior art discloses the reformatting of data from a first data format to a second data format. Data reformatting is a data manipulation operation and the

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data manipulation information accessed by the devices supplies this interface information. (see Singhal col. 3, lines 42-53; col. 7, lines 17-20: reformat data from a first data format to a second data format)

- 3.2 Applicant argues that the referenced prior art does not disclose “... *a method for dynamically reformatting multimedia information in a network of appliances comprising the steps of: ... receiving said multimedia information from one of said appliances at a local appliance ...*” (see Remarks Page 12, Lines 204) ; “... *decoding a format of said received media information according to stored user interface information ...*” (see Remarks Page 14, Lines 2-3)

The Singhal (6,925,481) prior art discloses the capability to reformat data from a first format to a second format (see Singhal col. 3, lines 42-53; col. 7, lines 17-20: reformat data from a first data format to a second data format) In addition, the Singhal (6,925,481) prior art discloses the capability to process media type data (see Singhal col. 3, lines 32-38: web content and voice messaging data (i.e. multimedia, video, audio) and the capability to utilize a user interface (see Singhal col. 5, lines 25-36: user interface) in operation.

- 3.3 Applicant argues that the referenced prior art does not disclose “... *a memory for storing appliance compatibility information received from each of said appliances on said appliance network ...*” (see Remarks Page 12, Lines 21-22)

The Singhal (6,925,481) prior art discloses the capability to store data manipulation information (i.e. a requirement for interface, compatibility information utilized in data transfer and data reformat operations between devices). (see

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Singhal col. 7, lines 49-54: data manipulation database, required to manipulate data for compatibility and formatting operations)

3.4 In reply to an obviousness rejection under 35 U.S.C. § 103, applicant argues that the secondary and primary reference combination is not allowed due to nonobviousness.

The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Furthermore, in response to applicant's arguments against the reference individually, one cannot show nonobviousness by attacking references individually where rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Therefore, the rejection of claims 1-37 is proper and maintained herein.

Claim Rejection - 35 USC § 102

The text of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. **Claims 1 - 5, 7, 8** are rejected under 35 U.S.C. 102(e) as being anticipated by

Singhal et al. (US Patent No. 6,925,481).

Regarding Claim 1, Singhal discloses an appliance network having format-neutral multimedia communication, said network comprising:

- a) two or more appliances connected to said appliance network, each of said two or more appliances having interface information defining its multimedia capabilities; (see Singhal col. 3, lines 28-30; col. 1, lines 23-30; col. 7, lines 4-6; col. 7, lines 52-54: wireless information devices (i.e. appliances, handheld devices, PDAs), information for processing content)
- b) a communication protocol for communicating said interface information over said appliance network (see Singhal col. 5, lines 43-50; col. 5, line 62 - col. 6, line 2: protocols utilized to transfer content), wherein each of said two or more appliances comprises:
 - i) an application information base (AIB) for storing interface information for each of said two or more appliances connected to said appliance network; (see Singhal col. 7, lines 4-6; col. 7, lines 49-54: repository (i.e. database) for data manipulation (i.e. conversion, reformat))
 - ii) a network interface for communicating multimedia data over said appliance network; (see Singhal col. 6, lines 41-51: communications network interface for wireless information devices (i.e. appliances)) and
 - iii) a multimedia manager for translating said multimedia data into a compatible format. (see Singhal col. 7, lines 1-6; col. 7, lines 17-20; col. 7, lines 52-54:

data manipulation manager (i.e. multimedia manager), convert data into a required format)

Regarding Claim 2, Singhal discloses the appliance network of claim 1 wherein said communication protocol prompts each of said two or more appliances to communicate said interface information upon connecting to said appliance network. (see Singhal col. 5, lines 43-50; col. 5, line 62 - col. 6, line 2; col. 7, lines 17-20: communication protocols utilized, request (i.e. prompt) for interface information)

Regarding Claim 3, Singhal discloses the appliance network of claim 1 further comprising: a communication configuration, said communication configuration comprising at least one of: a point-to-point configuration; a point-to-multipoint configuration; a ring configuration; and a spoke configuration. (see Singhal col. 6, lines 41-51: wireless communications network (i.e. point-to-point configuration))

Regarding Claim 4, Singhal discloses the appliance network of claim 3 wherein said communication configuration is selected by one of said two or more appliances initiating communication of said multimedia data. (see Singhal col. 8, lines 50-54: selection of services (i.e. type of communications))

Regarding Claim 5, Singhal discloses the appliance network of claim 1 wherein said communication protocol provides for each of said two or more appliances to communicate all of its interface information to each other of said two or more appliances

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connected to said appliance network when said each of said two or more appliances initially connects to said appliance network. (see Singhal col. 7, lines 17-20: client (i.e. appliance) device initiated visual data conversion (i.e. a request))

Regarding Claim 7, Singhal discloses the appliance network of claim 1 wherein said multimedia data is translated into said compatible format for each of said two or more appliances receiving said multimedia data by one of said two or more appliances transmitting said multimedia data over said appliance network. (see Singhal col. 7, lines 1-6; col. 7, lines 17-20; col. 7, lines 52-54: data manipulation manager (i.e. multimedia manager), convert data into a required format)

Regarding Claim 8, Singhal discloses the appliance network of claim 1 wherein said multimedia data is translated into said compatible format for each of said two or more appliances receiving said multimedia data by one of:

- a) one of said two or more appliances transmitting said multimedia data over said appliance network; (see Singhal col. 6, lines 41-51: wireless communications network for data transmission) and
- b) said each of said two or more appliances receiving said multimedia data; responsive to said interface information. (see Singhal col. 7, lines 17-20; col. 7, lines 52-54: visual data converted based on interface (i.e. data manipulation) information)

Claim Rejections - 35 USC § 103

5. **Claims 6, 9 - 19, 21 - 25, 27 - 37** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Singhal** in view of **Margulis et al.** (US Patent No. 6,157,396).

Regarding Claim 6, Singhal discloses the appliance network of claim 1 wherein said multimedia manager comprises:

- a) at least one coding-decoding application for converting a format of received multimedia data into said compatible format responsive to said interface information; (see Singhal col. 7, lines 1-6; col. 7, lines 17-20: data manipulation manager (i.e. multimedia manager), convert (i.e. reformat, decode) data into a required format)

Singhal does not specifically disclose the processing of color (i.e. gamut) visual data. However, Margulis discloses:

- b) a gamut mapping application for translating said multimedia data onto a local user interface; (see Margulis col. 16, lines 53-67; col. 14, lines 34-36; col. 19, line 66 - col. 20, line 3: color mapping, translation) and
- c) a resolution application for regulating a resolution of said multimedia data into a compatible resolution for said local user interface. (see Margulis col. 19, lines 18-20; col. 21, lines 36-40: visual data display resolution adjustment)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Singhal to enable the usage of color mapping and display

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resolution adjustment techniques as taught by Margulis. One of ordinary skill in the art would be motivated to employ Margulis in order to enhance and optimize image quality for an image processing system. (see Margulis col. 5, lines 13-14: "*... an image processing system to enhance display quality and provide the best possible visual images ...*")

Regarding Claim 9, Singhal discloses a method for dynamically reformatting multimedia information in a network of appliances comprising the steps of:

- a) obtaining interface settings for each of said appliances; (see Singhal col. 7, lines 49-54: database for interface settings)
- b) receiving said multimedia information from one of said appliances at a local appliance; (see Singhal col. 7, lines 17-20: communications network, conversion request processed)
- c) decoding a format of said received multimedia information according to said interface settings; (see Singhal col. 7, lines 17-20; col. 7, lines 52-54: conversion of visual data based on interface information)

Singhal does not disclose color translation and resolution adjustment techniques for visual data. However, Margulis discloses:

- d) translating color data of said multimedia information into a color scheme of said local appliance; (see Margulis col. 14, lines 34-36; col. 19, line 66 - col.20, line 3: color translation table) and

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- e) adjusting a resolution of said multimedia information into a resolution scheme of said local appliance. (see Margulis col. 19, lines 18-20; col. 21, lines 36-40: visual data display resolution adjustment)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Singhal to enable the usage of color translation and display resolution adjustment techniques as taught by Margulis. One of ordinary skill in the art would be motivated to employ Margulis in order to enhance and optimize image quality for an image processing system. (see Margulis col. 5, lines 13-14)

Regarding Claim 10, Margulis discloses the method of claim 9 wherein said translating step comprises the steps of:

- a) reading a point from said color data of said multimedia information; (see Margulis col. 14, lines 34-36; col. 19, line 66 - col. 20, line 3: color translation) and
- b) looking up a translation point in a table of color points within said color scheme. (see Margulis col. 14, lines 34-36; col. 19, line 66 - col. 20, line 3: color translation table)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Singhal to enable the usage of color translation techniques as taught by Margulis. One of ordinary skill in the art would be motivated to employ Margulis in order to enhance and optimize image quality for an image processing system. (see Margulis col. 5, lines 13-14)

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Regarding Claim 11, Margulis discloses the method of claim 10 further comprising the steps of:

- a) substituting said translation point into said multimedia information when said translation point is found in said table; (see Margulis col. 14, lines 34-36; col. 19, line 66 - col. 20, line 3: color translation table) and
- b) Interpolating an estimated color point corresponding to said point from said multimedia information. (see Margulis col. 16, lines 53-67; col. 14, lines 34-36; col. 19, line 66 - col. 20, line 3: color mapping, translation table)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Singhal to enable the usage of color mapping and translation techniques as taught by Margulis. One of ordinary skill in the art would be motivated to employ Margulis in order to enhance and optimize image quality for an image processing system. (see Margulis col. 5, lines 13-14)

Regarding Claim 12, Margulis discloses the method of claim 9 wherein said translating step comprises the step of: calculating a translation point using a gamut mapping formula. (see Margulis col. 14, lines 34-36; col. 19, line 66 - col. 20, line 3; col. 16, lines 53-67: color translation table, color mapping)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Singhal to enable the usage of color mapping and translation techniques as taught by Margulis. One of ordinary skill in the art would be

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motivated to employ Margulis in order to enhance and optimize image quality for an image processing system. (see Margulis col. 5, lines 13-14)

Regarding Claim 13, Margulis discloses the method of claim 9 wherein said adjusting step comprises the steps of:

- a) down-sampling said resolution of said multimedia information when said resolution is higher than said resolution scheme of said local appliance; (see Margulis col. 19, lines 18-20; col. 21, lines 36-40: conversion from a high resolution to a low resolution) and
- b) up-sampling said resolution of said multimedia information when said resolution is lower than said resolution scheme of said local appliance. (see Margulis col. 23, lines 45-49: conversion from a low resolution to a high resolution)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Singhal to enable resolution adjustments to visual data between a high and a low resolution as taught by Margulis. One of ordinary skill in the art would be motivated to employ Margulis in order to enhance and optimize image quality for an image processing system. (see Margulis col. 5, lines 13-14)

Regarding Claim 14, Margulis discloses the method of claim 13 further comprising the step of: smoothing said multimedia information. (see Margulis col. 14, lines 45-48; col. 19, lines 14-17; col. 23, lines 57-59: visual data smoothing capabilities)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Singhal to enable visual data smoothing techniques as taught by Margulis. One of ordinary skill in the art would be motivated to employ Margulis in order to enhance and optimize image quality for an image processing system. (see Margulis col. 5, lines 13-14)

Regarding Claim 15, Singhal discloses the method of claim 9 further comprising the steps of:

- c) coding said multimedia information into a remote visual format according to said interface settings; (see Singhal col. 7, lines 17-20: convert (i.e. reformat) visual data for display) and
- d) transmitting said multimedia information from said local appliance to another one of said appliances on said network. (see Singhal col. 6, lines 41-51: communications network for data transmission between client (i.e. appliance) devices)

Singhal does not disclose display visual data resolution adjustment and the utilization of a color translation table. However, Margulis discloses:

- a) adjusting said resolution scheme of said local appliance into a remote resolution scheme; (see Margulis col. 19, lines 18-20; col. 21, lines 36-40: display resolution adjustments)

- b) translating said color scheme of said local appliance into a remote color gamut space; (see Margulis col. 16, lines 53-67; col. 14, lines 45-48: color mapping, translation)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Singhal to enable the usage of a color translation table and adjusting display resolution as taught by Margulis. One of ordinary skill in the art would be motivated to employ Margulis in order to enhance and optimize image quality for an image processing system. (see Margulis col. 5, lines 13-14)

Regarding Claim 16, Singhal discloses the method of claim 9 further comprising the steps of:

- a) copying said received multimedia information; (see Singhal col. 7, lines 49-54: repository (i.e. database) for content information) and
- b) transmitting said copied multimedia information to one of said appliances on said network. (see Singhal col. 6, lines 41-51: wireless communications network for data transmission)

Regarding Claim 17, Singhal discloses a dynamic reformatting engine for processing image data transmitted on an appliance network:

- a) code for managing communication from an appliance on said appliance network; (see Singhal col. 6, lines 41-51: communications network for data transmission)

- b) a memory for storing appliance compatibility information received from each of said appliances on said appliance network; (see Singhal col. 7, lines 49-54: repository (i.e. database, storage) for compatibility information)
- c) code for interpreting at least one format of said image data responsive to said appliance compatibility information; (see Singhal col. 7, lines 17-20; col. 7, lines 52-54: convert (i.e. format) visual data for display device)

Singhal does not disclose color mapping and visual data resolution adjustments. However, **Margulis** discloses:

- d) code for mapping points from one color gamut space to another color gamut space; (see Margulis col. 16, lines 53-67: color mapping) and
- e) code for adjusting a resolution of said image data into another resolution. (see Margulis col. 19, lines 18-20; col. 21, lines 36-40: visual data display resolution adjustment)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Singhal to enable color mapping and visual data resolution adjustment techniques as taught by Margulis. One of ordinary skill in the art would be motivated to employ Margulis in order to enhance and optimize image quality for an image processing system. (see Margulis col. 5, lines 13-14)

Regarding Claim 18, Margulis discloses the dynamic reformatting engine of claim 17 further comprising: code for smoothing said image data after said image data manipulated by said appliance. (see Margulis col. 14, lines 45-48; col. 19, lines 14-17;

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col. 23, lines 57-59: visual data smoothing capabilities)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Singhal to enable visual data smoothing techniques as taught by Margulis. One of ordinary skill in the art would be motivated to employ Margulis in order to enhance and optimize image quality for an image processing system. (see Margulis col. 5, lines 13-14)

Regarding Claim 19, Singhal discloses the dynamic reformatting engine of claim 17 further comprising: code for processing said image data at one of said appliances for display on another of said appliances according to appliance compatibility information corresponding to said another of said appliances. (see col. 7, lines 17-20; col. 7, lines 52-54: conversion of visual data (i.e. based on compatibility information) for client (i.e. appliance) device)

Regarding Claim 21, Singhal discloses a network appliance capable of dynamically reformatting visual data communicated across a network of appliances, said network appliance comprising:

- a) an appliance manager for obtaining interface information for each appliance connected to said network of appliances; (see Singhal col. 7, lines 1-6: data manipulation (i.e. conversion, reformat) server (i.e. appliance manager))
- b) an appliance information base for storing said interface information; (see Singhal col. 7, lines 49-54: repository (i.e. database) storage)

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- c) at least one codec for transcoding visual data formats responsive in part to said interface information; (see Singhal col. 7, lines 17-20; col. 7, lines 52-54: convert (i.e. transcoding, reformat) visual data based on interface information)

Singhal does not disclose visual data mapping and resolution adjustment techniques. However, Margulis discloses:

- d) a conversion manager for mapping said visual data onto a local user interface of said network appliance; (see Margulis col. 16, lines 53-67: data mapping capabilities) and
- e) a resolution manager for adjusting said visual data to a resolution of said local user interface. (see Margulis col. 19, lines 18-20; col. 21, lines 36-40: visual data resolution adjustment)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Singhal to utilize visual data mapping and resolution adjustment techniques as taught by Margulis. One of ordinary skill in the art would be motivated to employ Margulis in order to enhance and optimize image quality for an image processing system. (see Margulis col. 5, lines 13-14)

Regarding Claim 22, Singhal discloses the network appliance of claim 21 further comprising: a transmission manager for managing the transcoding of visual data transmitted from said network appliance into a format compatible with another appliance connected to said network of appliances responsive to said interface information. (see Singhal col. 7, lines 1-6; col. 7, lines 17-20; col. 7, lines 52-54: data manipulation server

(i.e. transmission manager), convert (i.e. format) visual data for display)

Regarding Claim 23, Singhal discloses the network appliance of claim 21 further comprising: a reception manager for managing the transcoding of visual data received from another appliance on said network of appliances into a format compatible with said local user interface. (see Singhal col. 7, lines 1-6; col. 7, lines 17-20; col. 7, lines 52-54: data manipulation server (i.e. reception manager), convert (i.e. format) visual data for display)

Regarding Claim 24, Margulis discloses the network appliance of claim 21 wherein said resolution manager includes:

- a) a down-sampler for reducing said resolution of said visual data when said resolution of said visual data exceeds said resolution of said local user interface; (see Margulis col. 19, lines 18-20; col. 21, lines 36-40: conversion from a high resolution to a low resolution) and
- b) an up-sampler for increasing said resolution of said visual data when said resolution of said visual data is lower than said resolution of said local interface. (see Margulis col. 23, lines 45-49: conversion from a low resolution to a high resolution)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Singhal to enable adjustments to visual data between a high and a low resolution as taught by Margulis. One of ordinary skill in the art would be

motivated to employ Margulis in order to enhance and optimize image quality for an image processing system. (see Margulis col. 5, lines 13-14)

Regarding Claim 25, Margulis discloses the network appliance of claim 24 wherein said resolution manager further includes: a smoothing algorithm for blending said visual data. (see Margulis col. 14, lines 45-48; col. 19, lines 14-17; col. 23, lines 57-59: smoothing of visual data)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Singhal to utilize visual data smoothing techniques as taught by Margulis. One of ordinary skill in the art would be motivated to employ Margulis in order to enhance and optimize image quality for an image processing system. (see Margulis col. 5, lines 13-14)

Regarding Claim 27, Singhal discloses the network appliance of claim 26 further comprising: a store and forward device for storing said non-reformatted copy of said visual data and forwarding said data to said another appliance. (see Singhal col. 7, lines 25-29: data forwarding capability)

Regarding Claim 28, Singhal discloses the network appliance of claim 21 wherein said conversion manager includes:

- a) a look up table for mapping a remote gamut point of said communicated visual data into a local gamut point within a local gamut space of said network

appliance; (see Margulis col. 16, lines 53-67: color (i.e. gamut) space mapping)
and

- b) an interpolator for interpolating said remote gamut point into said local gamut space when a location of said local gamut point is not disposed in said look up table. (see Margulis col. 16, lines 53-67; col. 14, lines 34-36; col. 19, line 66 - col. 20, line 3: color mapping, translation techniques)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Singhal to utilize color mapping and translation table techniques as taught by Margulis. One of ordinary skill in the art would be motivated to employ Margulis in order to enhance and optimize image quality for an image processing system. (see Margulis col. 5, lines 13-14)

Regarding Claim 29, Singhal discloses a method for reformatting media information in a networked appliance comprising the steps of:

- a) receiving said media information at a network interface; (see Singhal col. 6, lines 41-51: wireless communications network for data transmission)
- b) decoding a format of said received media information according to stored user interface information; (see Singhal col. 7, lines 17-20; col. 7, lines 52-54; col. 18, lines 3-9: convert (i.e. decode, reformat) visual data)

Singhal does not disclose color mapping and display resolution adjustment techniques. However, Margulis discloses:

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- c) mapping color points from said media information onto a color system used by said networked appliance; (see Margulis col. 16, lines 53-67: color mapping) and
- d) adapting a resolution of said media information according to a user interface of said networked appliance. (see Margulis col. 19, lines 18-20; col. 21, lines 36-40: visual data display resolution adjustment)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Singhal to utilize visual data color mapping and resolution adjustment techniques as taught by Margulis. One of ordinary skill in the art would be motivated to employ Margulis in order to enhance and optimize image quality for an image processing system. (see Margulis col. 5, lines 13-14)

Regarding Claim 30, Singhal discloses the method of claim 29 further comprising: transmitting user interface information for said networked appliance when said networked appliance connects to a network. (see Singhal col. 7, lines 7-20; col. 6, lines 41-51: request (i.e. user interface information) for visual data conversion (i.e. format), communication network)

Regarding Claim 31, Singhal discloses the method of claim 29 further comprising:

- a) receiving user interface information for all appliances connecting to a network on which said networked appliance is connected; (see Singhal col. 7, lines 17-20: request (i.e. user interface information) to convert (i.e. format) visual data) and

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- b) storing said received user interface information. (see Singhal col. 7, lines 49-54: repository (i.e. database) storage)

Regarding Claim 32, Margulis discloses the method of claim 29 further comprising: smoothing said received media information prior to displaying said received media information on said user interface of said networked appliance. (see Margulis col. 14, lines 45-48; col. 19, lines 14-17; col. 23, lines 57-59: smoothing of visual data)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Singhal to utilize visual data smoothing techniques as taught by Margulis. One of ordinary skill in the art would be motivated to employ Margulis in order to enhance and optimize image quality for an image processing system. (see Margulis col. 5, lines 13-14)

Regarding Claim 33, Margulis discloses the method of claim 29 wherein said mapping step comprises the steps of:

- a) reading each of said color points of said media information; (see Margulis col. 16, lines 53-67: color mapping)
 - b) looking up a translation color point that corresponds to said read color point; (see Margulis col. 14, lines 34-36; col. 19, line 66 - col. 20, line 3: color translation table)
 - c) substituting said translation color point into said media information when said translation color point is found; (see Margulis col. 16, lines 53-67: color mapping)
- and

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- d) interpolating an estimated translation color point into said media information when said translation color point is not found. (see Margulis col. 14, lines 34-36; col. 19, line 66 - col. 20, line 3: color translation table)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Singhal to enable visual data color translation and color mapping techniques as taught by Margulis. One of ordinary skill in the art would be motivated to employ Margulis in order to enhance and optimize image quality for an image processing system. (see Margulis col. 5, lines 13-14)

Regarding Claim 34, Margulis discloses the method of claim 33 wherein said looking up step comprises: looking up said translation color point in a look-up table. (see Margulis col. 14, lines 34-36; col. 19, line 66 - col. 20, line 3: color translation table)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Singhal to enable the usage of a color translation table as taught by Margulis. One of ordinary skill in the art would be motivated to employ Margulis in order to enhance and optimize image quality for an image processing system. (see Margulis col. 5, lines 13-14)

Regarding Claim 35, Singhal discloses the method of claim 29 wherein said adapting step comprises the steps of:

- a) determining when said resolution of said media information is not compatible with said user interface of said networked appliance; (see Singhal col. 7, lines 49-54: data manipulation information required for visual data display)

Singhal does not disclose visual data display resolution adjustment techniques. However, Margulis discloses:

- b) down-sampling said resolution when said resolution is higher than said user interface; (see Margulis col. 19, lines 18-20; col. 21, lines 36-40: conversion from a high resolution to a low resolution) and
- c) up-sampling said resolution when said resolution is lower than said user interface. (see Margulis col. 23, lines 45-49: conversion from a low resolution to a high resolution)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Singhal to enable adjustments to visual data between a high and a low resolution as taught by Margulis. One of ordinary skill in the art would be motivated to employ Margulis in order to enhance and optimize image quality for an image processing system. (see Margulis col. 5, lines 13-14)

Regarding Claim 36, Singhal discloses the method of claim 31 farther comprising the steps of:

- c) coding said media information according to said stored interface information for said another appliance connected to said network; (see Singhal col. 7, lines 17-20; col. 7, lines 52-54: convert visual data for display) and

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- d) transmitting said multimedia information from said networked appliance to said another appliance connected to said network. (see Singhal col. 6, lines 41-51: communications network for data transmissions)

Singhal does not disclose visual data resolution adjustment and color translation techniques. However, Margulis discloses:

- a) adjusting said resolution of said media information according to said stored interface information for another appliance connected to said network; (see Margulis col. 19, lines 18-20; col. 21, lines 36-40: display resolution adjustment techniques)
- b) translating said color system of said networked appliance according to said stored interface information for said another appliance connected to said network; (see Margulis col. 14, lines 34-36; col. 19, line 66 -col. 20, line 3: color translation)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Singhal to enable the usage of display resolution adjustment and color translation techniques as taught by Margulis. One of ordinary skill in the art would be motivated to employ Margulis in order to enhance and optimize image quality for an image processing system. (see Margulis col. 5, lines 13-14)

Regarding Claim 37, Singhal discloses the method of claim 29 further comprising the steps of:

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- a) copying said received media information; (see Singhal col. 7, lines 49-54: repository (i.e. database) for content information) and
- b) transmitting said copied media information through said network interface. (see Singhal col. 6, lines 41-51: communications network for data transmissions)

6. **Claims 20, 26** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Singhal-Margulis** and further in view of **Carrein** (US Patent No. 6,262,744).

Regarding Claim 20, Singhal discloses the dynamic reformatting engine of claim 17 further comprising:

- b) code for communicating said copy of said image data to another of said appliances without any further processing to said copy. (see Singhal col. 7, lines 25-29: forward (i.e. transfer) image data to client (i.e. appliance))

Singhal does not disclose the usage of a signal splitter. However, Carrein discloses:

- a) a signal divider for making a copy of said image data; (see Carrein col. 8, lines 35-41: signal splitter capabilities, generating a copy)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Singhal to enable the usage of a signal splitter for the division of a signal as taught by Carrein. One of ordinary skill in the art would be motivated to employ Carrein in order to optimize and increase the colors represented on a display. (see Carrein col. 1, lines 8-10: "*... a wider gamut is obtained for the colour*")

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representation on such a display system ... "; col. 1, lines 28-32: " ... a wider gamut ... for a display system ... where the aim is to obtain as natural as possible a representation of an original as, for example, in the case of digital cinema, digital photography ...")

Regarding Claim 26, Singhal discloses the network appliance further comprising: passing a non-reformatted copy of said visual data to another appliance on said network of appliances. (see Singhal col. 7, lines 25-29: forward (i.e. transfer) image data to appliance) Singhal does not disclose the usage of a signal splitter. However Carrein discloses the network appliance of claim 21 further comprising: a signal splitter for passing a copy of said visual data. (see Carrein col. 8, lines 35-41: signal splitter capabilities, generating a copy)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Singhal to enable the usage of a signal splitter as taught by Carrein. One of ordinary skill in the art would be motivated to employ Carrein in order to optimize and increase the colors represented on a display. (see Carrein col. 1, lines 8-10; col. 1, lines 28-32)

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kyung H. Shin whose telephone number is (571) 272-3920. The examiner can normally be reached on 7:30 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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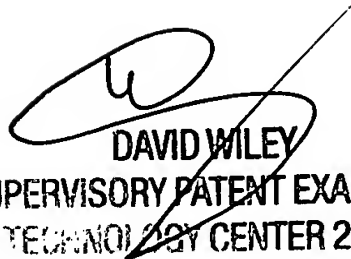
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K H S

Kyung H Shin
Patent Examiner
Art Unit 2143

KHS

March 1, 2005


DAVID WILEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100